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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,506	11/29/2003	Patrik Larsson	LARSSON 22-17-Div	1444

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EXAMINER

MAI, TAN V

ART UNIT	PAPER NUMBER
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2193

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/724,506

Applicant(s)

LARSSON ET AL.

Examiner

Tan V. Mai

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 and 8 is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu.

Rejection grounds continue to be those set forth in the previous office action mailed 8/4/04 (paragraph #4).

3. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weinberger.

Rejection grounds continue to be those set forth in the previous office action mailed 8/4/04 (paragraph #5).

4. Applicant's arguments filed on 12-27-04 have been fully considered but they are not persuasive.

Applicant, in their remarks, argue THREE major points that:

(1) "[n]othing in Chiu resembles FIG. 6. But claim 4 has many more detailed features recited which features are neither explicitly disclosed in Chiu nor would have been obvious to one of ordinary skill in the art at the time the invention was made. Examiner appears to have taken Official Notice that all designs of multiplier circuits would have a plurality of carry save adders and a propagate adder [at the final stage]' (see office action at page 3, para 4). Applicants respectfully request the Examiner to show the basis for taking such official notice. See M.P.E.P. ... (holding that general conclusions concerning what is "basic knowledge" or "common sense" to one of ordinary skill in the art without specific factual findings and some concrete evidence in the record to support these findings will not support an obviousness rejection). In particular, focusing on the recitation in claim 4,

a plurality of half-adder/full-adder series combinations
coupled to the last carry-save adder, each of the plurality of half-

adder/full-adder series combinations receiving two carry bit of the plurality of carry bits output by the last carry-save adder and two sum bits of the plurality of sum bits output by the last carry-save adder, and outputting two result bit and a carry bit

This feature is nowhere to be seen in Chiu. Examiner is requested to reconsider and withdraw this rejection"(emphasis added);

(2) "**Weinberger does not disclose or suggest a carry save adder.** Nowhere in Weinberger is described a series of carry save adders, a plurality of carry-propagate adders and an output register as described in the examined claim 1. Weinberger is directed toward a binary full adder stage from half-adder stages"(emphasis added); and

(3) Weinberger does not show "**a plurality of half-adder/full-adder series combinations**" as recited in claim 4.

With respect to the arguments, the examiner carefully reviews all the applied references and the claimed invention.

(1) First, the examiner agrees with applicants that Chiu does not show a plurality of half-adder/full-adder series combinations; however, Chiu's "propagate adder" should have a **plurality of full-adders** and at least one **half-adder** [for the least significant bit] because the feature is old and well known in the multiplication art, e.g., see (1) ~~and~~ ^{Men} Griesbach et al (record reference J, Paper No. 04292004) disclose, e.g., see Fig. 2, a squarer (special multiplier) having adder (28) which includes **two half-adder/full-adder series combinations** and (2) Wang et (5,914,892) disclose, e.g., see Fig. 2A, an array multiplier having an array of adders (203) having **two half-adder/full-adder series combinations**. Therefore, the rejection is still proper.

(2) Second, **Weinberger does show carry save adder feature** in Fig. 12 because each row of half / full adders does not propagate the carry out signal from the n-bit to (n+1)-bit [in the same row]. See Griesbach et al (record Reference J, Paper No.

04292004), Fig. 2, carry-save adders (26) that have a similar structure of Weinberger.

Therefore, the rejection is still proper.

(3) Third, see explanation in (1) above.

6. Claims 5-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cited reference is art of interest.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan V. Mai whose telephone number is (571) 272-3726. The examiner can normally be reached on Mon-Wed and Fri. from 9:30am to 2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki, can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is:

Official (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.



Tan V. Mai
Primary Examiner